

CLAIMS

1. A method for evaluating a seal on a package, comprising:
determining a value of a burst test force parameter, the burst test force
5 parameter being a parameter that results from a force placed on the package during a
burst test; and
using the value of the burst test force parameter to determine a value of a peel
test force parameter for the package, the peel test force parameter being a parameter
that results from a force placed on the package during a peel test.
- 10 2. The method of claim 1, wherein using the value of the burst test force
parameter to determine a value of a peel test force parameter includes
comparing the burst test force parameter value to a test conversion
relationship associating burst test force parameter values and peel test force parameter
15 values, the association indicating the burst test force parameter value and the peel test
force parameter value that would result from performing a burst test and a peel test
such that a seal would peel at substantially the same velocity during the burst test and
during the peel test.
- 20 3. The method of claim 2, wherein the relationship is expressed as a database
including a plurality of peel test force parameter values that are each associated with a
burst test force parameter value.
- 25 4. The method of claim 2, wherein the relationship is expressed as a
mathematical expression.
5. The method of claim 1, wherein the burst test is a constant pressure burst test.

6. The method of claim 1, further comprising:
determining the velocity at which the seal peels during the burst test.
7. The method of claim 1, further comprising:
5 using the value of the burst test force parameter to determine an integrity for
the seal, the integrity being generated from a peel test.
8. The method of claim 1, further comprising:
comparing the determined value of the peel test force parameter to integrity
10 evaluation data.
9. The method of claim 8, wherein the integrity evaluation data includes a
plurality of integrity evaluation relationships that provide a relationship between peel
velocity and the peel test force parameter value, each integrity evaluation relationship
15 being associated with a particular seal integrity.
10. The method of claim 1, further comprising:
determining the velocity at which the seal peels during the burst test; and
comparing the determined value of the peel test force parameter and the
20 determined peel velocity to integrity evaluation data.
11. The method of claim 1, wherein the burst test force parameter value is selected
from the group consisting of:
pressure, work, force, power and rate of fluid inflow.
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12. The method of claim 1, wherein the peel test force parameter value is selected
from the group consisting of work, force and power.

13. A method for evaluating a seal on a package, comprising:
evaluating a value of a burst test force parameter, the burst test force
parameter being a parameter that results from a force placed on the package during a
burst test; and

5 using the value of the burst test force parameter to determine a seal integrity,
the seal integrity being an integrity value that is determined by performing peel tests
on the seal.

14. The method of claim 13, wherein using the value of the burst test force
10 parameter to determine a peel test seal integrity for the seal includes
using the value of the burst test force parameter to determine a value of a peel
test force parameter for the package; and

comparing the value of the peel test force parameter to seal integrity
evaluation data.

15 15. The method of claim 14, wherein the integrity evaluation data includes a
plurality of integrity evaluation relationships that provide a relationship between peel
velocity and the peel test force parameter value, each integrity evaluation relationship
being associated with a particular seal integrity.

20 16. The method of claim 15, further comprising:
determining the velocity at which the seal peels during the burst test; and
comparing the determined peel velocity and the value of the peel test force
parameter to one or more of the integrity evaluation relationships.

25 17. The method of claim 13, wherein the burst test includes a constant pressure
burst test.

and
a,
18. The method of claim 13, wherein the burst test force parameter value is selected from the group consisting of:

pressure, work, force, power and rate of fluid inflow.

5 19. Data for use with a seal testing device, comprising:

burst test force parameter values; and

peel test force parameter values related to the burst test force parameter values, the relation indicating the burst test force parameter value and the peel test force parameter value that would result from performing a burst test and a peel test
10 such that a seal would peel at substantially the same velocity during the burst test and during the peel test.

20. The data of claim 19, wherein the relationship is expressed in a database.

15 21. The data of claim 19, wherein the database includes a plurality of burst test force parameter values and a plurality of peel test force parameter values that are each associated with one of the burst test force parameter values, an associated peel test force parameter value and burst test force parameter value resulting from a burst test and peel test performed such that a seal would peel at substantially the same velocity
20 during the burst test and during the peel test.

22. The data of claim 19, wherein the relationship is expressed in a mathematical expression.

25 23. The method of claim 19, wherein the burst test force parameter value is selected from the group consisting of:

pressure, work, force and power.

24. The method of claim 19, wherein the peel test force parameter value is selected from the group consisting of work, force and power.

25. A database for use with a seal testing device, comprising:
5 a plurality of burst test force parameter values; and
a plurality of peel test force parameter values that are each associated with one of the burst test force parameter values.

26. The database of claim 25, wherein an associated peel test force parameter value and burst test force parameter value result from a burst test and peel test performed such that a seal would peel at substantially the same velocity during the burst test and during the peel test.

27. The database of claim 25, wherein the database is associate with a type of package.

28. The method of claim 25, wherein the burst test force parameter value is selected from the group consisting of:
pressure, work, force and power.

29. The method of claim 25, wherein the peel test force parameter value is selected from the group consisting of work, force and power.

30. A method of preparing data for use with a seal testing device, comprising:
performing a burst test and a peel test such that a type of seal on a type of package peels at substantially the same velocity during the peel test and the burst test;
evaluating a burst test force parameter value that results from a force applied to the package during the burst test;

evaluating a peel test force parameter value that results from a force applied to the package during the peel test; and

storing the value of the burst test force parameter such that it is associated with the value of the peel test force parameter.

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31. The method of claim 30, wherein storing the value of the burst test force parameter such that it is associated with the value of the peel test force parameter includes

storing the value of the burst test force parameter and the value of the peel test force parameter in a database.

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32. The method of claim 31, wherein the database is associated with the seal type and the package type.

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33. The method of claim 30, wherein storing the value of the burst test force parameter such that it is associated with the value of the peel test force parameter includes

storing the value of the burst test force parameter and the value of the peel test force parameter in a machine readable medium.

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34. The method of claim 30, wherein the burst test force parameter value is selected from the group consisting of:

pressure, work, force, power and rate of inflow.

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35. The method of claim 30, wherein the peel test force parameter value is selected from the group consisting of work, force and power.

36. A database for use with a seal testing device, comprising:
a plurality of seal velocity values; and
a plurality of peel test force parameter values that are each associated with one
5 of the seal velocity values, each peel test force parameter value resulting from
performing a peel test at the associated peel velocity.

37. The method of claim 36, wherein the database is associated with a particular
seal integrity

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38. The method of claim 36, wherein storing the value of the peel test force
parameter such that it is associated with the value of the peel velocity includes
storing the value of the peel test force parameter and the value of the peel
velocity in a database.

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39. The method of claim 36, wherein storing the value of the peel test force
parameter such that it is associated with the value of the peel velocity includes
storing the value of the burst test force parameter and the value of the peel test
force parameter in a machine readable medium.

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40. A method of preparing data for use with a seal testing device, comprising:
performing a plurality of peel tests on packages that each have the same seal
integrity rating, each peel test performed at a different peel velocity;
evaluating a peel test force parameter value resulting from each peel test; and
25 storing the peel test force parameter values such that the peel test force
parameter value for a particular peel test is associated the with the peel velocity at
which the particular peel test was performed.